



Beryllium Health and Safety Committee

Steve Abeln, Committee Chairman

Abeln@lanl.gov 505.667.3954

Draft Meeting Minutes

February 1 - 3, 2000

Albuquerque, New Mexico (Energy Training Complex)

A meeting of the Beryllium Health and Safety Committee was held in Albuquerque, New Mexico on February 1-3, 2000, at the Energy Training Complex. The meeting agenda is appended as Attachment A. A list of attendees is appended as Attachment B. A list of discussion topics and associated notes is given below.

Tuesday February 01, 2000

1. BHSC Subcommittee Breakout Sessions

In the last BHSC meeting (March 2-4, 1999), the BHSC decided that the former subcommittee structure (a health monitoring subcommittee and a workplace monitoring subcommittee) could be improved upon. It was decided to regroup the subcommittee responsibilities into three subcommittees as follows:

CBD Prevention Committee (David Deubner)

CBD Research Needs Committee (Mark Hoover)

CBD Technical Practices, Standards, and Measures (Mike Garcia)

The subcommittees were tasked with the following:

1. Defining a list of core members and technical advisors
2. Defining the roles and responsibilities of the subcommittee
3. Assign action items/deliverables accordingly

CBD Prevention Committee (David Deubner)

The CBD Prevention Subcommittee outlined the basic structure of the subcommittee as follows:

A. Core Membership and Technical Advisory Members:

- *David Deubner (subcommittee chair):* *Brush Wellman*
- Tony Quinn: AWE
- Kim Ellis: LANL
- Larry Jones: DOE/Y-12
- Jim Jenkins: Y-12
- Jim Slawski: DOE/DP

Technical Advisory:

- | | |
|------------------|---------------------|
| ▪ John Jarkovich | ORNL |
| ▪ Ghramm Cogbill | Cardiff |
| ▪ Wendy Bushell | AWE |
| ▪ Bruce Campbell | Y-12 |
| ▪ Raul Brenner | Machinist |
| ▪ Gary Foster | Utility Operator |
| ▪ Mark Kolanz | Brush Wellman |
| ▪ Mike Kent | Brush Wellman |
| ▪ Dick Corle | Retired Rocky Flats |
| ▪ Robert Winkle | JCNM @ LANL |

B. Defined Roles and Responsibilities

1. Seek out new or innovative ways to reduce exposure to beryllium in order to prevent Be sensitization and CBD.
2. Determine what elements and work practices are most important in terms of preventing CBD (i.e. screening, tests for sensitivity, raising awareness, etc.)
3. Emphasizing the hierarchy of controls
4. Recommend a standard approach/best practices review (update and promote the Good Practices Guide).
5. Review scientific literature for relevance and get word out on things that could be relevant to CBD prevention. This subcommittee will team with the CBD Research Needs Subcommittee due to necessary overlap.

C. Action Items/Deliverables from the Subcommittee

1. Larry Jones will get information via Bruce Campbell for an update on microwave technology and recent developments regarding parylene coatings to tamp loose beryllium contamination.
2. Develop fact sheets based on Good Practices and Implementation Guide. In addition, the development of guidance cards for line managers (i.e. Brush Wellman's fact sheet website).
3. The subcommittee will get an update on John Jankovich's colorimetric swipe detection development
4. Tony Quinn will obtain the HSE report through Larry Jones on different swipe techniques.

In addition to the items that the subcommittee was tasked to accomplish by the chair, the group reviewed the bulleted items from the previous BHSC meeting's minutes. The central theme of the discussions was that perhaps the emphasis might have the wrong focus. For example, quarterly air sampling would suffice, but must swipe to <0.2 micrograms/100 cm squared for release. The question was raised if this is a good allocation of resources. As a result, the following items were addressed:

1. How clean is clean (for public release)?
 - The members of the group noted concern that there is no consistent method of measurement. In addition, the wet method could compromise quality (corrosion issues) and isn't good in radiation.

- The subcommittee felt that the key issue is that it is not clear how much value the current emphasis on swipe sampling has.
- The subcommittee discussed the need to publish results of case studies which deal with surface contamination and correlation with breathing zone samples (i.e. during decontamination operations).
- In addition, the group discussed the political aspect of worker concern. The question was raised as to the value added for different actions in terms of preventing CBD and beryllium sensitization.
- The subcommittee members also discussed the need to review microwave hardened oxide technologies that reduce free surface beryllium on Be or BeO components

2. CBD Prevention/Work Practices

- The subcommittee discussed the need to assess the value added by different gloving techniques at Y-12 and AWE (i.e. double gloving, cotton vs. latex, etc.)
- Also discussed was the hands to mouth/nose route of exposure issue. The constituents expressed the need for the beryllium community to explore this further.
- The group also discussed the potential value of adoption of AWE practices of ventilation checks prior to each operation (sash height at a fixed 12"/flange sash opening with ¼" lip "aero foils"
- The constituents also discussed the need for reviewing various site administrative controls (i.e. AWE risk assessments for each new job, Y-12 Job Hazard Analysis techniques, LANL protocols, etc.)
- The group discussed that training and information is the key (e.g. Y-12 three level matrix: General Awareness, Procedurally Specific, On-Site Training. This is a good example of management practices.
- The subcommittee discussed the Y-12 "Cycle Time Reduction" scheme where management, workers team critiques Be operations to see what could be done more cost efficient, better, etc.).

3. Hierarchy of Controls:

<u>UK</u>	<u>USA</u>
Eliminate	Substitution/Elimination
Reduce	Engineering
Isolate	Administrative Controls
Control	PPE

4. Logic For Presentation to Upper Management

- The subcommittee discussed strategy on presenting to management how preventing the disease is cheaper than treating it.
- The constituents discussed the Y-12 political environment and law suits and the need to demonstrate that the worker is protected, so management does not feel liable.

CBD Research Needs Committee (Mark Hoover)

The CBD Research Needs Subcommittee outlined the basic structure of the subcommittee as follows:

A. Core Membership and Technical Advisory Members:

- **Mark Hoover (subcommittee chair):** **LRRI**
- Kathryn Creek LANL
- Marc Kolanz Brush Wellman
- Nicholas Lewis AWE
- Donald Bruce AWE - alternate

Technical Advisory:

- Donna Cragle Y-12
- Babs Marone LANL
- Ron Scripsick LANL
- Mike Kent Brush Wellman
- Jim Johnson LLNL
- Hugh Smith LANL
- Steve Burastero
- Mike McCawley
- Wayne Sanderson
- John Froines UCLA
- Kay Kreiss NIOSH
- Lee Newman National Jewish
- Lisa Maier
- Pat Breysee Johns Hopkins University
- Navy EH Center representative
- DOD representative

Before identifying the subcommittee's roles and responsibilities, the core group identified several different issues that needed to be addressed. Specifically, the core group discussed what the objective of the subcommittee would be, what potential research audiences might be considered, what reasons the research might be done, and what categories of research studies might be placed in. The following is a summary of the ideas that were presented under each of these topics:

OBJECTIVE:

Promote the right research for the right reasons

Research Audiences

1. Workers
2. customers
3. public
4. Regulators
5. Legal
6. Scientists
7. Law makers

Reasons to do research

1. Prevent CBD in workers
 2. Better treatment methods
 3. Cure CBD in affected workers
 4. Develop accurate hazard/risk communications
 - new employees
 - existing employees
 - customers
 - sensitized employees
 - employees with CBD
-
1. Educate/explain risks for:
 - customers/potential customers
 - public
 - regulators
 - law makers
 2. Promote scientifically valid regulations/standards CBD - cancer - skin disease - sensitization
 - EPA
 - air
 - water
 - waste
 - OSHA
 - ACGIH
 - NIOSH
 - NTP
 - IARC
 - FDA
 3. Document changes in knowledge

Categories of Research

1. Airborne exposure
2. Non-airborne exposure
3. Solubility/bioavailability
4. Industrial hygiene program
5. Biomarkers/biomonitoring
6. CBD/sensitivity risk factors
7. CBD/sensitization diagnostics
8. CBD treatment
9. Cancer
10. Genetics
11. Basic biology (pathophysiology)
12. Animal models

B. Defined Roles and Responsibilities

1. Track current research
2. Identify and prioritize new research
3. Identify and seek funding
4. Maintain beryllium bibliography
5. Intra-committee research review

D. Action Items/Deliverables from the Subcommittee

1. Track Current Research (Kolan)

- Maintain list
- Monitor Progress
- Report to Committee
 - Assign monitors

2. Identify and prioritize new research (Creek)

- Identify research needs
- Define deliverables
- Cost/benefit determination
- Develop prioritization strategy
- Prioritize list
- Identify research candidates

Action Items

1. Poll committee members, technical advisors, workers
2. Draft list of research
3. Determine strategy options
 - Consensus
 - Model

3. Identify/Seek Funding (Kolan/Creek)

- Identify all sources of funding
- Determine successful application profile (requirements)
- Identify and solicit champions
- Bring researcher/champion together
- Develop/submit proposal

4. Maintain Beryllium Bibliography (Hoover/Lewis)

- Determine enhancements

- Identify fields (most useful)
- Scan/add articles
- Determine copyright issues
- Update
- Establish maintenance system

5. Intra-Committee Research Review (Hoover)

- Identify new articles
- Identify reviewers
- Collect reports
 - technical review presentation (committee member)
 - Invite author
- Get review on committee meeting agenda

CBD Technical Practices, Standards, and Measures (Mike Garcia)

The CBD Technical Practices, Standards, and Measures Subcommittee (TPS&M) outlined the basic structure of the subcommittee as follows:

The CBD Technical Practices, Standards, and Measures Subcommittee (TPS&M) outlined the basic structure of the subcommittee as follows:

A. Core Membership and Technical Advisory Members:

- | | |
|--|---------------|
| ▪ <i>Mike Garcia (subcommittee chair):</i> | <i>DOE/AL</i> |
| ▪ Tom Ford: | Y-12 |
| ▪ Dave Barber: | DOE/LAO |
| ▪ Graham Coghill | AWE |
| ▪ David Weitzman | DOE/EH |
| ▪ George Fulton: | LLNL |
| ▪ Don Harvey: | DOE/DP |
| ▪ John McKenney: | SNL/AL |

Technical Advisory:

- | | |
|----------------------------------|-------------------------|
| ▪ Dick Corle: | (Ret. Rocky Flats) |
| ▪ David Deubner: | BISAC |
| ▪ Jim Jamaffe: | (LLNL) |
| ▪ Bruce Campbell: | Y-12 |
| ▪ Bill Munzer: | Y-12 |
| ▪ Pat Breysse: | John Hopkins University |
| ▪ Ken Meyer | Pantex |
| ▪ Bill Frede: | Allied Signal |
| ▪ K. Creek/K. Ellis/S. Abeln: | LANL |
| ▪ Doug Hiebert/Lee Ann Holwager: | Rocky Flats |
| ▪ Elton Hewett: | Hanford |

B. Defined Roles and Responsibilities

6. Make available an interface on best management practices for beryllium operations
7. Support operational guidance development efforts (DOE, DOL, ACGIH, DOE contractors, etc.)
8. Make available an interface for leading performance indicators for improving safety and health of beryllium operations.
9. Develop a liaison program with other organizations interested in the safe handling of beryllium.

E. Action Items/Deliverables from the Subcommittee

5. The subcommittee will be tasked with the development and implementation of a web site. This is a responsibility of the Technical Practices, Standards, and Measures subcommittee to a) help facilitate the dissemination of information for best management practices, b) facilitating the availability of leading indicators/measures for improving safety and health of beryllium operations, and c) facilitating the liaison program. The scope of the website, however, will accommodate the BHSC as a whole.(J. McKenney)
6. The subcommittee will also utilize a list server. The list server will facilitate real time discussion of beryllium issues on line. The list server will be a conversational information tool, while the website will be a tool for archiving documentation. (D. Weitzman)
7. Accumulate best management practices from various sites to post on the web and make information available to groups across the DOE complex as well as those entities external to the DOE. (All - M. Garcia, point of contact)
8. Solicit “Best Management Practices” and CBDPP support documents from the BHSC to post on the website. The subcommittee recognizes the readily available information on the higher level documentation. However, the supporting documentation for the overall implementation and operations is often more interesting and technically useful than the higher level documentation. It also is less accessible, and therefore in greater demand to the beryllium community as a whole. Because the support information is not nearly as readily accessible as the mainframe of most CBDPP's, the group has targeted this type of information for the subcommittee to gather and archive on the web. (All - M. Garcia, point of contact)
9. Participate in discussion/comment resolution for the DOE implementation guide on the beryllium rule. The group will distill the comments for redundancy and relevancy and make recommendations accordingly. The group will submit these recommendations to the BHSC for review. (All – D. Harvey, point of contact)
10. Develop a list of potential contacts for other interested organizations to cultivate a healthy information exchange. In addition, the subcommittee will be responsible for the drafting of a

form letter for distribution to solicit interest amongst these target groups. (D. Harvey will coordinate with Monty Herr)

The committee decided that it would be useful to develop a formal liaison program with other organizations having an interest in the safe handling of beryllium. An organizational liaison coordinator was selected, and a list of potential liaison organizations was prepared. The coordinator can expand the list and seek liaison appointees in coordination with the BHSC chair.

BHSC Organizational Liaisons Program - Monty Herr, Coordinator

DOE:

NIOSH:

BISAC: David Deubner

NASA:

SERDP: Chuck Pellerin

AIHA

ACGIH

Navy EH Division

Beryllium Advisory Committee:

(medical, epi, some IH)

Other industry representatives

11. The subcommittee core members have agreed to hold monthly teleconference meetings to discuss progress of the aforementioned deliverables. (All – M. Garcia will coordinate)

Wednesday February 2, 2000

The committee reconvened for a collective dialogue with David Weitzman on the CFR 850 Rule Discussions and Issue Identifications.

(George Fulton Notes)

Thursday February 3, 2000

The committee reconvened for a collective dialogue with Sue E. Umshler, Jim Slawskie, and Mike Garcia to discuss the FACA issues.

(George Fulton Notes)

The BHSC committee collectively convened to review the tasks that the addressed items in each subcommittee. There was some discussion that David Deubner's group and Mike Garcia's group has some overlap. To try to mitigate this, Mike Garcia will periodically update status to the Chair and touch base with David Deubner to ensure duplication is minimized.

The group also discussed that the CBD Prevention Subcommittee had issues to address that are somewhat diverse in nature. It was suggested that this subcommittee be split. Issues of pragmatic application seem to direct that a fourth subcommittee be formed: The CBD Performance Measures and Feedback Subcommittee. Included would be David Duebner, Steve Abeln, a LANL ISMS person, etc.

Upcoming Meeting Dates:

The committee agreed that the next meeting would be held in Livermore, California from June 20, through June 22, 2000. The committee discussed the value of holding quarterly meetings, and as a result, appointed the third quarter meeting site at Oak Ridge, Tennessee. The dates will be from October 17 through October 19, 2000.

Attendance Lists:

February 1, 2000

Name	Organization	Phone	email
Steve Abeln	LANL	505.667.3954	abeln@lanl.gov
Michael Garcia	DOE/AL	505.845.6397	mgarcia@doeal.gov
Tom Ford	Y-12 LMES	865.576.7182	rtf@y-12.doe.gov
Kathryn Creek	LANL	505.665.1929	creek@lanl.gov
Bert Griswold	DOE/AL	505.845.5573	rgriswold@doeal.gov
Frank White	DOE/AL	505.845.4877	fwhite@doeal.gov
David J Weitzman	DOE/EH	301.903.5401	dave.weitzman@eh-doe.gov
Larry R Jones	DOE/Y-12	865.576.1853	IY12@ornl.gov
Dave Barber	DOE/LAAO	505.667.3818	dbarber@doeal.gov
Graham Cogbill	AWE	(1222) 750101	N/A
Jim Slawski	DOE/DP	301.903.5464	james.slawski@ns.doe.gov
Marc Kolan	Brush Wellman	216.383.6848	marc_kolan@brushwellman.com
Kim Ellis	LANL	505.665.8215	ellisk@lanl.com
Wendy Bushell	AWE	(0118)9826540	wbushell@awe.co.uk
Don Harvey	DOE/DP	301.903.7315	don.harvey@dp.doe.gov
George Fulton	LLNL	925.424.5162	fulton3@llnl.gov
Tony Quinn	AWE	(44)1189824377	tquinn@awe.co.uk
John L McKenney	SNL/AL	505.844.6772	jmcken@sandia.gov

February 2-3, 2000

Name	Organization	Phone	email
Steve Abeln	LANL	505.667.3954	abeln@lanl.gov
Michael Garcia	DOE/AL	505.845.6397	mgarcia@doeal.gov
Tom Ford	Y-12 LMES	865.576.7182	rtf@y-12.doe.gov
Kathryn Creek	LANL	505.665.1929	creek@lanl.gov
Bert Griswold	DOE/AL	505.845.5573	rgriswold@doeal.gov
Frank White	DOE/AL	505.845.4877	fwhite@doeal.gov
David J Weitzman	DOE/EH	301.903.5401	dave.weitzman@eh-doe.gov
Larry R Jones	DOE/Y-12	865.576.1853	IY12@ornl.gov
Dave Barber	DOE/LAAO	505.667.3818	dbarber@doeal.gov
Graham Cogbill	AWE	(1222) 750101	N/A
Jim Slawski	DOE/DP	301.903.5464	james.slawski@ns.doe.gov
Marc Kolan	Brush Wellman	216.383.6848	marc_kolan@brushwellman.com
Kim Ellis	LANL	505.665.8215	ellisk@lanl.com

Wendy Bushell	AWE	(0118)9826540	wbushell@awe.co.uk
Don Harvey	DOE/DP	301.903.7315	don.harvey@dp.doe.gov
George Fulton	LLNL	925.424.5162	fulton3@llnl.gov
Tony Quinn	AWE	(44)1189824377	tquinn@awe.co.uk
John L McKenney	SNL/AL	505.844.6772	jmcken@sandia.gov
David Deubner	BWI	419.862.4391	david_deubner@brushwellman.com
Nick Lewis	AWE	011441189827674	N/A
Robert Winkel	JCNM	505.667.5771	winkel_robert_g@lanl.gov
Naomi Becker	LANL	505.667.2165	nmb@lanl.gov
Steven Lee	LANL	505.665.6741	2sleepy@lanl.gov
Jean Dewart	LANL	505.665.0239	dewart@lanl.gov
Ken Groves	UCOP	510.987.0576	ken.groves@ucop.edu
Michela Reynolds	AI/OCC	505.845.5216	mreynolds@doeal.gov
Hugh Smith	LANL	505.665.2620	hnsmith@lanl.gov
Garbara Hargis	LANL	505.667.5231	hargisb@lanl.gov
Ernesto A Vigil	LANL	505.665.9268	ernie_vigil@lanl.gov
Dina Sassone	LANL	505.665.2977	dinas@lanl.gov
Rae Arguello	LANL	505.667.9372	arguellor@lanl.gov
Phil Grogan	LANL	505.665.6152	grogan@lanl.gov
Jacque McClory	LANL	505.665.4201	jmccclory@lanl.gov
Jim Seward	LLNL	925.423.6903	seward1@llnl.gov
Joan Gibson	UNM	505.272.0903	miriam@unm.edu